# SELF ASSESSMENT TEST -10
# CLASS 10+1
## CONIC SECTIONS

1. Find the eqn of the parabola whose focus is the pt (1,2) and directrix is x + 2y +3 =0.

2. Find the eqn of the parabola whose vertex at (1,-2) and directrix x +y+4=0

3. Find the focus,vertex,eqn of the directrix and axis of the parabola $x = y^2 - 2y + 3$ .

4. Find the eqn of the parabola whose vertex (0,0), passing thro. (2,3) and symm.w.r.t.y axis.

5. A cable of a uniformly loaded suspension bdidge hangs in the form of a parabola. The roadway which is horizontal and 100m long is supported by vertical wires attached to the cable , the longest wire being 30 m and shortest being 6 m. Find the length of a supporting wire attached to the roadway 18 m from the middle.

6. A beam is supported at its end pts by supports which are 12 m apart. Since the load is concentrated atits centre, there is a deflection of 3cm at the centre and the deflected beam is in the shape of a parabola.how far from the centre is the deflection 1 cm ?

7. Find the eqn of ellipse whose major axis on x-axis and passing thro.the pts (4,3) , (6,2).

8. Find the ecc. Of the ellipse if the distance between the foci is equal to the length of latus rectum.

9.An arch is in the form of a semi ellipse. It is 8 m wide and 2 m high at the centre. Find the height of the arch at a pt 1.5 m from one end.

10. A man running a race course notes that the sum of the distances from two flag posts from him is always 10m and the distance between the flag posts is 8 m. Find the eqn of the path traced by the man.

11.Find the eqn of hyperbola whose vertices $(\pm 2,0)$,foci$(\pm 3,0)$.

12.Find the eqn of the hyp. If conjugate axis is 5 and passes thro. the pt (1 , -2 ).